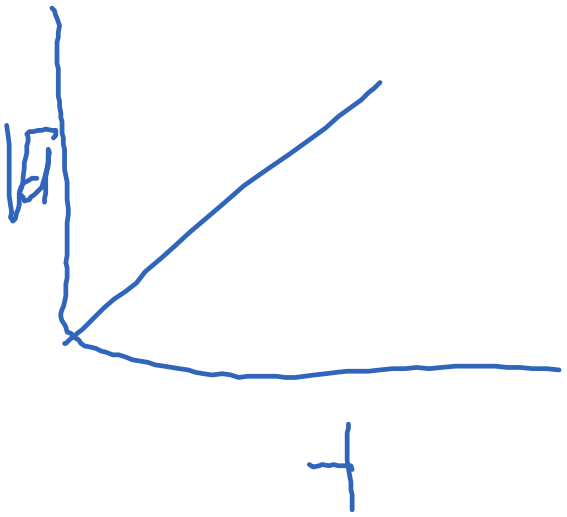
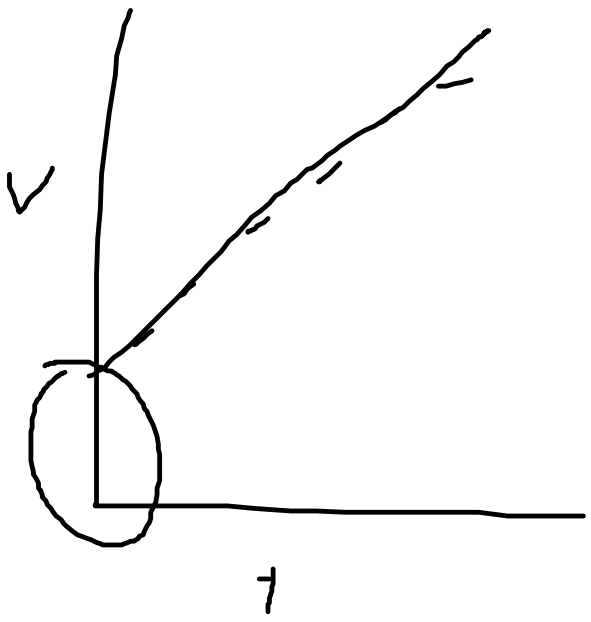
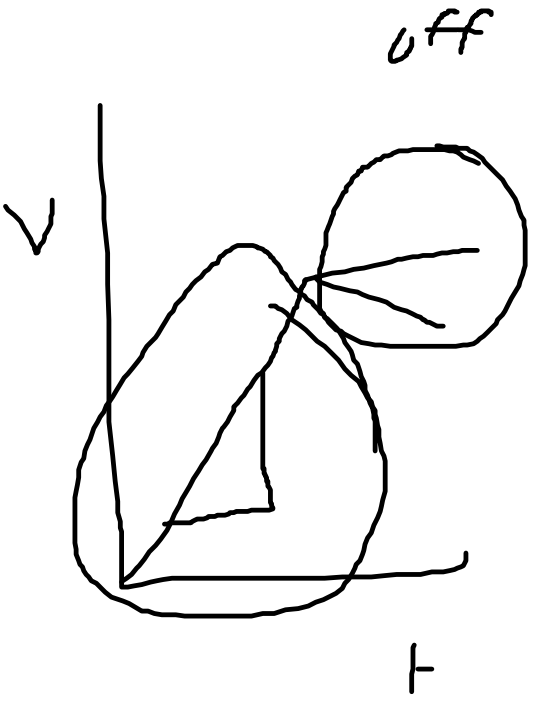
Monday, October 17, 2016 8:38 AM

Go over lab graphs
acceleration problems quiz next class
acceleration due to gravity



$$s = \frac{1/2at^2 + ut}{v = at + u}$$

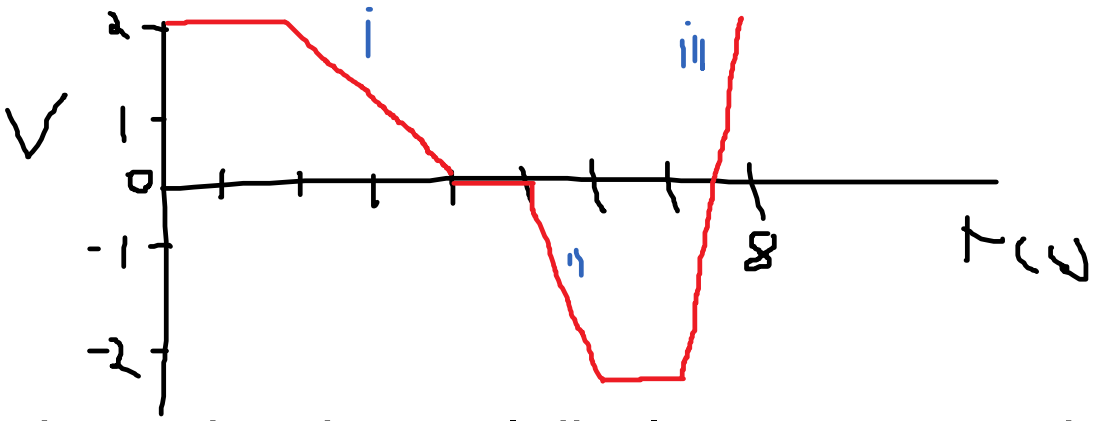




ticker tape
same shape as v-t graph but
1cm = 10 cm/s of v
each 6 dots = 0.1s

quiz:
$v=at+u$ $s=1/2at^2 + ut$ $v^2 = u^2 + 2as$ $s=1/2(u+v)t$

1. given the following v-t graph



a) determine the total displacement over the 8 seconds
b) determine the acceleration at i, ii and iii.
c) draw a d-t graph, a-t graph

2. You start from rest, and accelerate at 3.0 m/s^2 for
   a) 2.0s determine s
b) 5.0m determine v

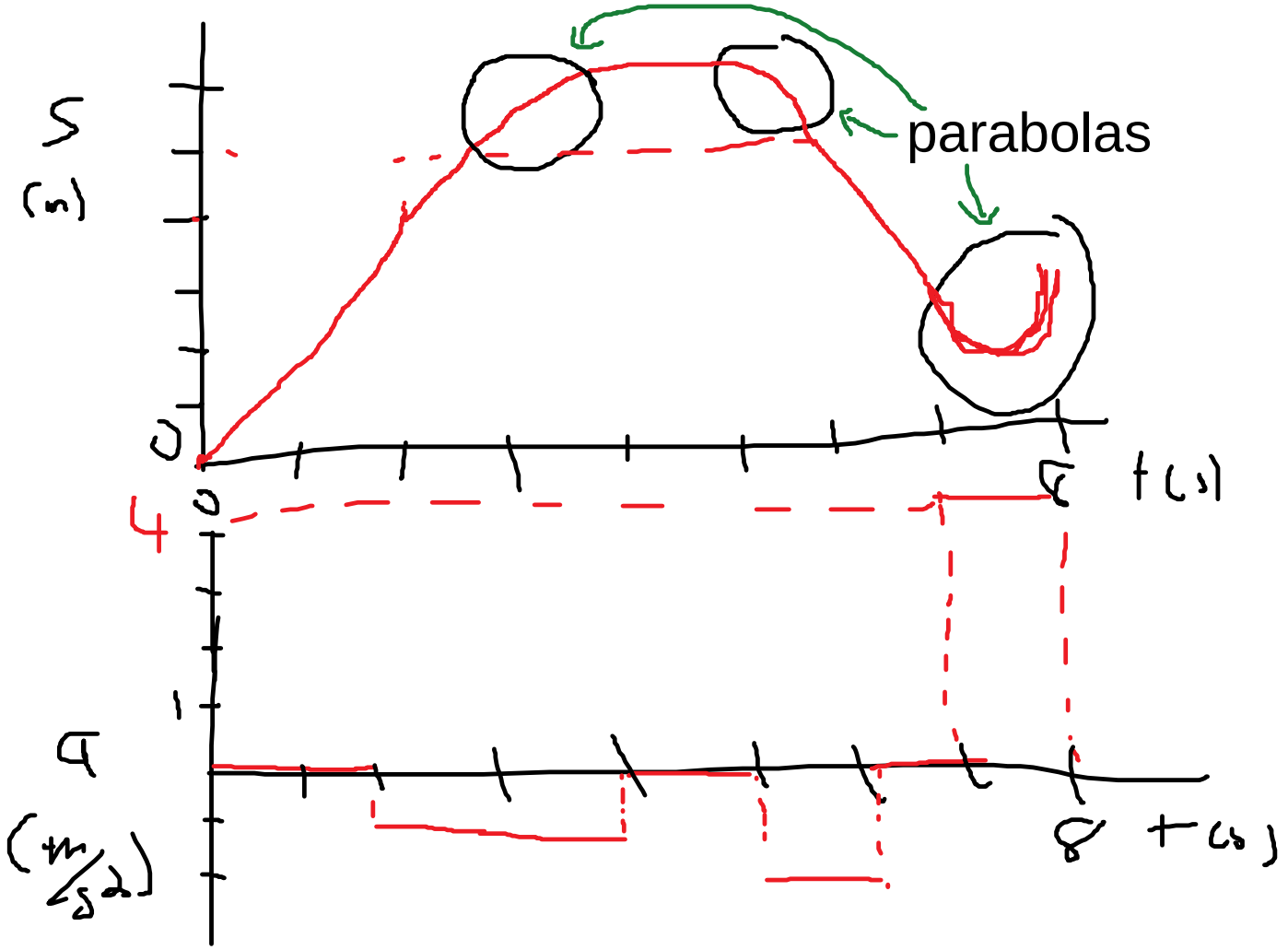
Hecht p79-82 problems 3, 15, 18, 39, 45, 53, 63

a) 4m + 2m + 0 + -1m + -2m + -1m +1m
   = 3.0 m

i) -2m/s/2s= -1.0 m/s^2

ii) -2.0 m/s^2

iii) 4.0 m/s^2



2a) $s=1/2at^2 + ut$

$s=1/2\ (3.0m/s^2)(2s)^2 + 0$

$s= 6.0m$

b) $v^2 = u^2 + 2as$

$v^2 = 0^2 + 2\ (3.0m/s^2)(5.0m)$

$v=$ root($30m^2/s^2$)

$v=5.5m/s$